



Philosophy prof. Agustín Rayo becomes new Dean of SHASS, begins role start of February

Rayo was associate dean for four years and served as interim dean since the beginning of last summer

By Kristina Chen
EDITOR IN CHIEF

Effective Feb. 1, Agustín Rayo PhD '01, professor of philosophy, will be the next Kenan Sahin Dean of the School of Humanities, Arts, and Social Sciences (SHASS) according to a Jan. 25 email from Provost Martin Schmidt PhD '88.

Rayo served as interim dean of SHASS beginning June 2021 after the previous dean, Melissa Nobles, became Chancellor of MIT. Nobles was dean from 2015 to 2021.

Prior to being interim dean, Rayo served as associate dean of SHASS from 2016 to 2019, during which he was chair of the Digital Humanities Steering Committee, the SHASS Faculty Diversity Committee, and the SHASS Educational Advisory Committee.

Rayo told MIT News that he hopes to "continue the work of past SHASS deans, to make sure that the fields we

study remain at the heart of the MIT experience."

Rayo also serves on the Computing Council of the Stephen A. Schwarzman College of Computing and as co-chair of MIT's Committee on Departmental Life.

Additionally, Rayo was Senior House housemaster from 2010 to 2014 and in the 2013–14 academic year, Rayo was on the Task Force on the Future of MIT Education.

President L. Rafael Reif also told MIT News that Rayo "brings to the deanship a wonderful record of leadership to SHASS and of service to all of MIT, from faculty governance to student life."

According to Schmidt's email, Rayo grew up in Mexico City and earned his undergraduate degree from the National Autonomous University of Mexico in 1996 and his doctorate in philosophy from MIT in 2001.

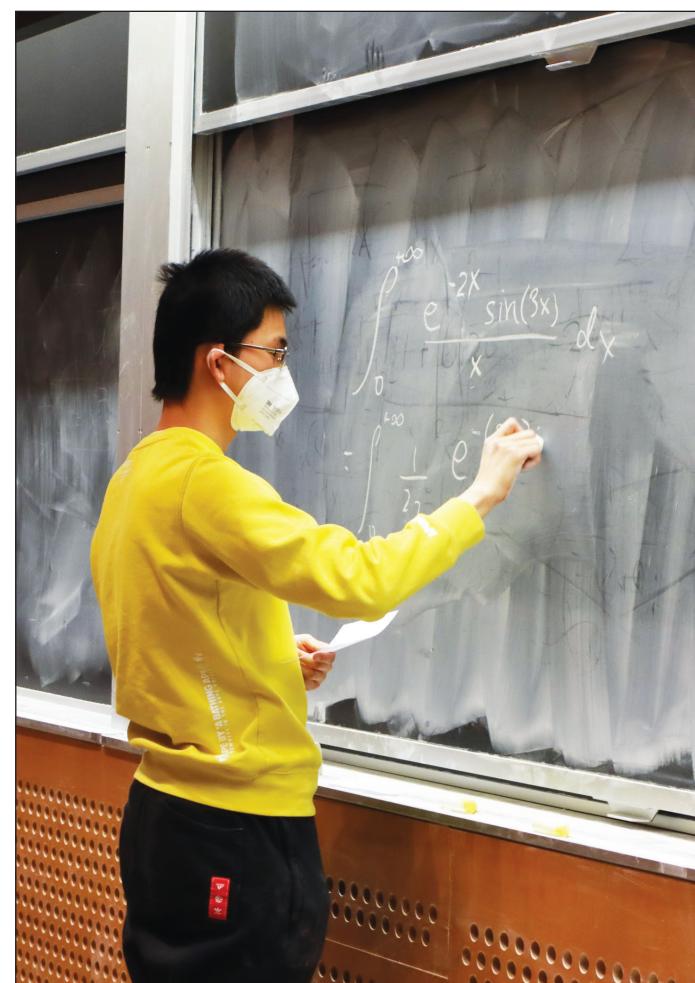
Rayo completed postdoctoral

research at the University of St. Andrews in Scotland and was assistant professor of philosophy at the University of California at San Diego before becoming a professor at MIT in 2005.

Rayo's research interests include metaphysics, philosophy of mathematics, language, and logic. Rayo has also taught 24.II8 (Paradox and Infinity) almost every Spring term since 2012.

Rayo is a member of the Norwegian Academy of Science and Letters, and his textbook *On the Brink of Paradox: Highlights from the Intersection of Philosophy and Mathematics* earned the 2020 Association of American Publishers Awards for Professional and Scholarly Excellence (PROSE) Award for the best textbook in humanities.

The Advisory Committee on the Selection of the Dean of SHASS, chaired by philosophy professor Caspar Hare, advised Schmidt on the selection of Rayo as dean.



KATE LU—THE TECH

First place winner Shengtong Zhang '22 competes in the final round of the 41st Annual MIT Integration Bee, Thursday.



FARIN TAVACOLI—THE TECH
MIT students virtually coordinate the 2022 Science Olympiad Invitational for high school students, Saturday.

Cynthia Breazeal will become the next dean of digital learning at the beginning of February 2022

Rajagopal steps down from dean position after five years to return to his full time faculty role in physics department

By Kristina Chen
EDITOR IN CHIEF

Effective Feb. 1, Cynthia Breazeal PhD '00, professor of media arts and sciences, will become dean for digital learning, according to a Jan. 26 email from Vice President for Open Learning Sanjay Sarma.

Breazeal is head of the Personal Robots group in the Media Lab and senior associate dean in MIT Open Learning.

Breazeal succeeds Professor Krishna Rajagopal who was dean for digital learning from 2017 to July 2021, when he began serving as acting vice president of open learning while Sarma was on sabbatical. Rajagopal will return to his role as physics department faculty full time.

While dean of digital learning, Rajagopal worked to expand MIT's MicroMasters Program, launch the next-generation platform for MIT OpenCourseWare (OCW), and led a consortium of 12 universities in "developing standards and tech-

nologies for verifiable digital credentials that allow learners to own their own credentials," according to Sarma's email.

Rajagopal also aided MIT's Residential Education team during the beginnings of the pandemic by helping transition to remote learning and launch the campus-wide adoption of the Canvas learning management system.

Rajagopal will continue to serve Open Learning by chairing the OCW Faculty Advisory Committee and the leadership council of the Digital Credentials Consortium.

As the next dean for digital learning, Breazeal will oversee various business units and research groups working to develop and deploy digital technologies for learning, such as MIT xPRO, Bootcamps, the Center for Advanced Virtuality, and MIT Integrated Learning Initiative. Additionally, Breazeal will work on corporate education efforts through online professional courses and content as well as lead research efforts for enhancing learning and teaching through the

use of new technologies.

Breazeal told MIT News that she is excited "to grow and expand [the teams'] respective programs and to develop new, more integrated, potentially thematic solutions for corporations and professionals."

Sarma wrote in his email that Breazeal "consistently displays an outstanding facility for leadership and collaboration" and that her work is "increasingly focused on inclusion and agency in the design, use, and education of digital technologies."

Breazeal's own research interests include artificial intelligence, social robotics, and human-computer interaction, resulting in achievements such as the Huggable teddy bear used for pediatric care and the Jibo robot and research platform.

Breazeal is also director of MIT Responsible AI for Social Empowerment and Education (RAISE), a cross-MIT initiative on advancing AI education for K-12 and adult learners, which was launched last year.

IN SHORT

Registration week for the spring term is Jan. 24–28.

Jan. 28 is the last day of Independent Activities Period.

Undergraduate registration for third quarter PE classes opens Jan. 28 at 8 a.m.

Jan. 31 is the first day of classes for the spring term.

Feb. 4 is the **registration deadline**, the deadline for second-term juniors to submit their HASS Concentration Proposal Form, and the deadline for final-term seniors to submit their HASS Concentration Completion Form.

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Send news and tips to news@tech.mit.edu.

XKCD

Life Before the Pandemic.
FUN, p. 8



A HERO

What is a hero?
ARTS, p. 5

GSU FOR EDUCATION

Increased support for graduate student TAs can improve the quality of learning at MIT.
OPINION, p. 4

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WEATHER

Explosive Nor'easter to deliver foot of snow, gusty winds

By Phoebe Lin
STAFF METEOROLOGIST

Get ready for the storm everyone's been waiting for — an explosive snowstorm is preparing to dump around a foot of snow as it moves over Boston this Saturday! Gusts of up to 40 mph are expected throughout the day, and temperatures will remain chillingly low. Nor'easters, named for bringing northeast

winds over the East Coast, are common at this time of year, but don't let that fool you. These storms can cause widespread damage and power outages, so make sure to stay indoors when possible.

Looking ahead, we can expect some temporary relief after Saturday with fairly sunny conditions. Boston is expected to warm up slightly as campus re-opens to students!

Extended Forecast

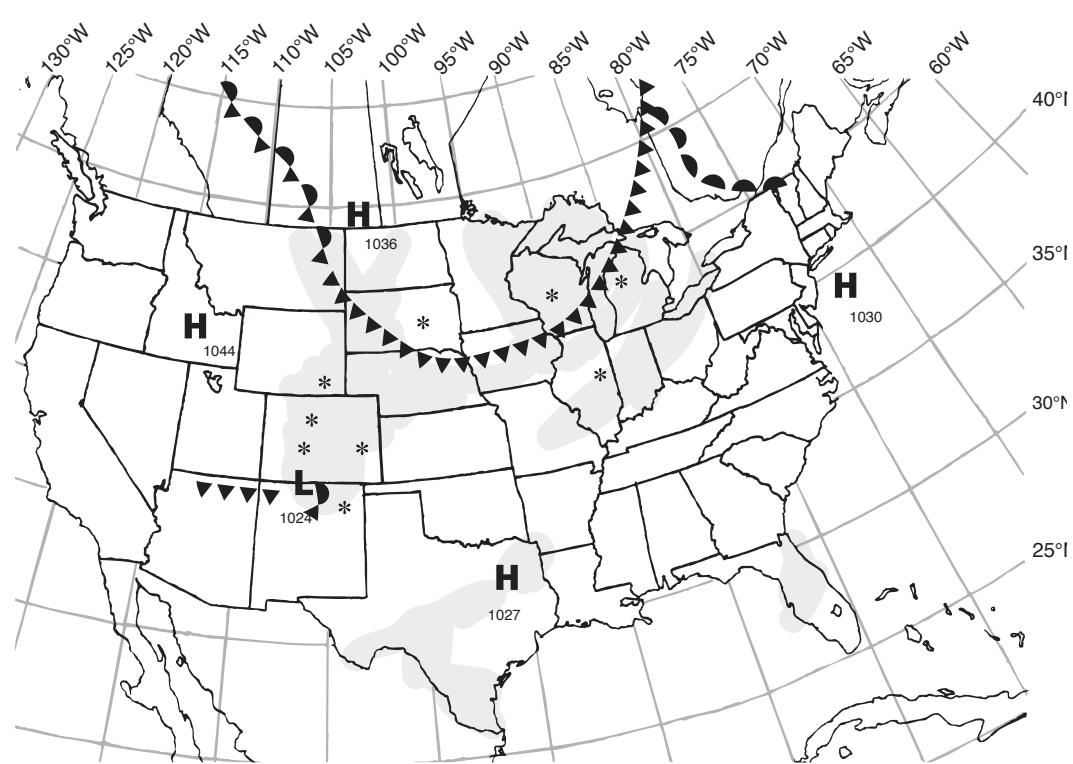
Today: Sunny. High around 27°F (-3°C). Northwest winds around 5-8 mph.

Tonight: Low around 25°F (-4°C), with southwest winds around 10 mph.

Tomorrow: Mostly cloudy, then snow overnight. High around 34°F (1°C) and low around 13°F (-11°C). Winds 8-11 mph, turning north.

Saturday: Heavy snow; winter storm watch in place! High around 25°F (-4°C) and low around 12°F (-11°C). Strong sustained winds, up to 23 mph, with gusts up to 40+ mph.

Sunday: Mostly sunny. High around 24°F (-4°C) and low around 8°F (-13°C). West winds 11-14 mph.



Situation for Noon Eastern Time, Thursday, January 27, 2022

Weather Systems	Weather Fronts	Precipitation Symbols	Other Symbols
H High Pressure	- - - Trough	Snow Rain	Fog
L Low Pressure	— Warm Front	Showers △ ▽	Thunderstorm
§ Hurricane	▲▲▲ Cold Front	Light *	Haze
	▲▲ Stationary Front	Moderate ** ..	
		Heavy *** ::	Compiled by MIT Meteorology Staff and <i>The Tech</i>



MAXIMO MACHADO—THE TECH
Bad Ideas Weekend ends off the fun and chaos with a Glow Prop Spinning Performance, Sunday.

Capture the Moment



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Like Alexander Hamilton?

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every week!**

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SPORTS BLITZ**Friday, January 21**

- Men's Swimming and Diving finishes first against Williams College 191-103.
- Women's Swimming and Diving gets lapped by Williams College 139-159.
- Men's Swimming and Diving makes a splash against New York University 191-107.
- Women's Swimming and Diving outraces New York University 161-139.
- Men's Volleyball blocked Regis College with a 3-0 win.
- Squash against Bates College was postponed.

Saturday, January 22

- Women's Fencing foiled Brandeis University 14-13.
- Men's Fencing fenced out Brandeis University 16-11.
- Women's Fencing eviscerated Dartmouth College 19-8.
- Men's Fencing parried Dartmouth College for a 23-4 victory.
- Women's Fencing got fenced by Boston College 11-16.
- Men's Fencing was foiled by Boston College 7-20.
- Women's Fencing did not recover against Brown University, losing 9-18.
- Men's Fencing lunged to a

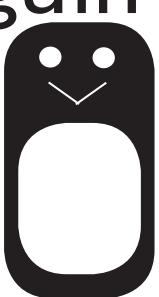
14-13 victory against Brown University.

- Women's Fencing riposted to the win against Vassar College 18-9.
- Men's Fencing ruled the strip against Vassar College for a 21-6 victory.
- Men's Swimming and Diving outswam Tufts University 200-98.
- Women's Swimming and Diving freystyled to victory against Tufts University 168-132.
- Women's Basketball dunked on Wheaton College 73-62.
- Men's Basketball took an L against Emerson College 72-79.
- Women's Track and Field raced at the Coaches Tribute Meet.
- Men's Track and Field performed Coaches Tribute Meet.
- Men's Volleyball spiked Emmanuel College for a 3-0 win.
- Men's Volleyball served against Rivier University 3-0.
- Squash squashed Amherst College 5-4.

Wednesday, January 26

- Women's Basketball clutched it out 76-72 against Springfield College.
- Men's Volleyball shut out Eastern Nazarene College 3-0.
- Men's Basketball beat Wheaton College 90-79.

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write for us**
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**Solution to Sadge**
from page 6

5	9	6	7	1	8	3	4	2
8	7	4	2	9	3	5	1	6
3	2	1	4	5	6	7	8	9
6	3	9	1	4	2	8	5	7
1	8	7	6	3	5	9	2	4
4	5	2	9	8	7	1	6	3
7	6	8	5	2	9	4	3	1
2	4	3	8	7	1	6	9	5
9	1	5	3	6	4	2	7	8

Solution to Smadge
from page 6

5	6	1	4	3	2
3	4	5	2	1	6
6	1	2	5	4	3
2	3	4	1	6	5
4	5	6	3	2	1
1	2	3	6	5	4

Solution to Smodge
from page 7

8	3	1	4	9	2	6	7	5
4	8	6	9	5	7	2	3	1
6	1	8	2	7	9	4	5	3
1	5	3	6	2	4	8	9	7
7	2	9	3	8	1	5	6	4
3	7	5	8	4	6	1	2	9
2	6	4	7	3	5	9	1	8
5	9	7	1	6	8	3	4	2
9	4	2	5	1	3	7	8	6

Solution to Smoge
from page 8

6	1	2	5	9	7	8	3	4
7	8	3	1	4	2	9	6	5
4	9	5	8	3	6	1	7	2
2	3	9	4	6	1	7	5	8
8	5	7	3	2	9	6	4	1
1	4	6	7	5	8	3	2	9
5	6	8	9	7	4	2	1	3
3	7	1	2	8	5	4	9	6
9	2	4	6	1	3	5	8	7

Solution to Blunder-ful
from page 6

R	A	S	P	S	T	A	R	C	H	E	S
R	O	U	T	E	H	U	G	E	S	O	O
E	A	T	E	N	A	R	I	D	I	O	W
D	R	O	P	P	E	F	L	Y	B	A	L
S	A	Y	E	E	R	E	R	O	E	R	O
A	L	P	L	E	F	T	D	O	R	S	O
D	I	E	T	T	R	A	P	O	R	E	O
O	V	E	R	C	O	K	E	M	E	A	L
E	V	E	R	G	E	A	C	S	C	A	T
S	E	X	E	S	K	I	S	T	R	Y	R
S	E	X	E	S	K	I	S	T	R	Y	R
E	T	C	E	E	L						
M	I	S	P	E	L	L	E	W	O	R	D
A	R	E	A	R	O	O	N	O	T	O	O
K	O	N	G	E	A	S	E	N	E	S	T
E	N	D	S	O	K	E	D	G	R	E	Y

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(aka, your new 3 a.m. pset support group)

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Upcoming Sports Events**FRIDAY 28**

Men's Track and Field
vs. Branwen Smith-King
Invitational

Women's Track and Field
vs. Branwen Smith-King
Invitational

Men's Track and Field
vs. John Thomas Terrier Classic
10:30 a.m.

Women's Track and Field
vs. John Thomas Terrier Classic
10:30 a.m.

Men's Volleyball
vs. Kean University
5:00 p.m.

Squash
vs. Middlebury College
4:00 p.m.

SUNDAY 30

Squash
vs. Williams College

Women's Fencing
vs. Yeshiva University
9:00 a.m.

Men's Fencing
vs. Yeshiva University
9:00 a.m.

Women's Fencing
vs. Haverford College
10:00 a.m.

Men's Fencing
vs. Princeton University
11:00 a.m.

Women's Fencing
vs. New York University
1:00 p.m.

Men's Fencing
vs. New York University
1:00 p.m.

Women's Fencing
vs. Duke University
2:00 p.m.

Men's Fencing
vs. Duke University
2:00 p.m.

Women's Fencing
vs. Stevens Institute of Technology
3:00 p.m.

Men's Fencing
vs. Stevens Institute of Technology
3:00 p.m.

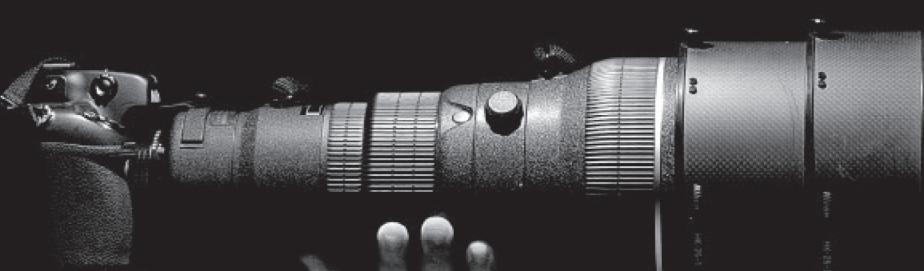
Women's Basketball
vs. Wellesley College
2:00 p.m.

Men's Basketball
vs. Clark University
3:00 p.m.

Women's Basketball
vs. Connecticut College
7:00 p.m.

MONDAY 31

It's Dangerous to Go Alone!



Take This.

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SPORTS SPORTS SPORTS SPORTS SPORTS SPORTS

OPINION OPINION OPINION OPINION OPINION



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GUEST COLUMN

Improving education at MIT through graduate student unionization

A union would alleviate the burden on graduate workers acting as students, teachers, and researchers

By Serita Sulzman

I came to MIT excited for an excellent graduate education in Materials Science and Engineering. After my first few weeks, it became clear to me that much of the work of crafting an education for both graduate and undergraduate students fell to the TAs. They were responsible for attending lectures, drafting problem sets in advance, teaching multiple recitation sessions each week, preparing review sessions, holding office hours, updating and configuring Canvas, drafting exam questions, proctoring exams, and grading problem sets, term papers, and exams. They do all of this while still being expected to conduct world-class research and take on many additional administrative and maintenance tasks.

Under the current system, faced with a massive workload and limited by time, TAs have two choices: 1) work very long hours to make sure students have the information and practice they need to be successful in the course, while also continuing research for their thesis, or 2) maintain a healthy work-life balance and keep a normal work schedule, but give fewer resources and less help to students, and be less productive with research. Much thought has already been given to how graduate students could win comprehensive mental health, vision, and dental care; more affordable housing options; protections for international students; and fair working conditions for researchers through unionization. However, education should not be overlooked. Through unionization, graduate students would have collective bargaining power to negotiate more support for TAs and ensure students, both graduate and undergraduate, receive a world-class education to match MIT's impressive reputation.

Education should not be overlooked.

After arriving at MIT, eager to tackle my first classes as a graduate student, I began to struggle to apply broad lecture concepts in practice. I stared at the homework with no clue how to begin despite having a good grasp of the material from the lectures. I found that problem sets were often created years ago and recycled despite there being massive changes to the course curriculum and faculty teaching the course. Repeatedly, definitions and concepts differed between lectures and problem sets, causing massive confusion since they were all still so new to me.

While I hoped that recitations would clear things up and give some much-needed example problems, we had only an hour to cover a few problems out of the dozens I was supposed to learn, practice, and master. Professors rarely wrote the problems themselves, and as a result, the practice rarely prepared me for the exams.

My TAs did try to help bridge the gap by holding extra office hours, and although

they all wanted me to succeed, many didn't have enough time to devote to teaching while simultaneously conducting quality research. Some TAs weren't able to attend lectures, review or modify recycled problem sets, upload solutions consistently, or finish grading exams and homework before the next problem set or exam. But addressing all of these issues that hinder student learning would take an incredible amount of time — time TAs certainly don't have!

Addressing all of these issues that hinder student learning would take an incredible amount of time — time TAs certainly don't have.

TAs face the unfair conundrum of whether to prioritize being good teachers and researchers or working extremely long hours to attempt both with limited success. Some students TA because they need funding, to complete a course requirement for a minor, or because they were involuntarily assigned the position by a department in need of more teaching staff. Still, some do it because they genuinely really enjoy teaching. Whatever their reason for becoming a TA, they face a massive challenge with relatively little support.

While many professors are trying to juggle myriad other responsibilities such as advising students on their research, traveling for conferences, writing textbooks or papers, serving on committees, and securing funding, they are often unaware of or fail to address these issues and stresses placed on TAs. While most professors care deeply for their students and many have a passion for teaching, the system for higher education is designed to put teaching second to research. For many professors, research — what brings in funding and determines their prospect for tenure — is their highest priority. And because TAs are put in a difficult situation where teaching may not be their first priority either, students get the short end of the stick. With the power of solidarity in a union, we could tweak the system to make it much easier for professors and TAs to prioritize providing a quality education to their students.

With a union contract, we can negotiate with MIT to define a clear job description and work expectations for TAs and guarantee certain learning standards for students. We can set guidelines for what TAs need from professors to provide the best support and education they can, and what students need from TAs and professors so they get more from their courses and have more time for their research.

What TAs need from professors:

- A clear, fair definition of the number of hours they are to spend on TA du-

ties per week (see for example the University of California graduate union contract).

- TA bonuses such as those won by graduate student unions at other universities. (Tufts won \$1,000 per course for graduate student-worker TAs after their first course.)
- Access to all previous years' problem sets, textbooks, supplementary reading materials, exams, answer keys, and lecture slides. (Some graduate union contracts guarantee access to required instructional materials — see for example the University of Michigan.)
- A calendar outlining the dates and times for recitations, problem set submission deadlines, and exams.
- Professor oversight, review, and yearly approval of all problem sets, recitation problems, and exams.
- Access to previous years' anonymous course evaluations (including written feedback and ratings).
- Clear, quantitative grading criteria for exams, problem sets, and projects (a rubric would be best).
- A guarantee of adequate TA trainings before being hired or the first day of class (see for example the University of Illinois at Urbana-Champaign graduate employee organization contract).

With a union contract, we can negotiate with MIT to define clear work expectations for TAs.

What students need from TAs and professors:

- Access to previous year's course evaluations and a detailed list of concept prerequisites in the description of each course in the course catalog.
- A calendar outlining the dates and times for recitations, problem set submission deadlines, and exams.
- Timely access to lecture slides, supplementary materials, and answer keys.
- Timely grades and feedback on problem sets and exams, prior to the next exam or assignment.
- Review sessions and/or materials before each exam.
- Clear, written expectations of learning outcomes and objectives from each lecture or unit between exams.

When graduate workers receive the support they need as TAs, they are better able to meet these central needs of students. **We need to remember that we all have the same goals here at MIT: to receive a quality education, provide fabulous teaching, and do cutting-edge research.** Using our collective power to negotiate for improvements that help TAs will in turn benefit students' learning experience and help professors deliver quality teaching. By voting yes on unionization, graduate students can further the goals of MIT.

OPINION POLICY

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TO REACH US

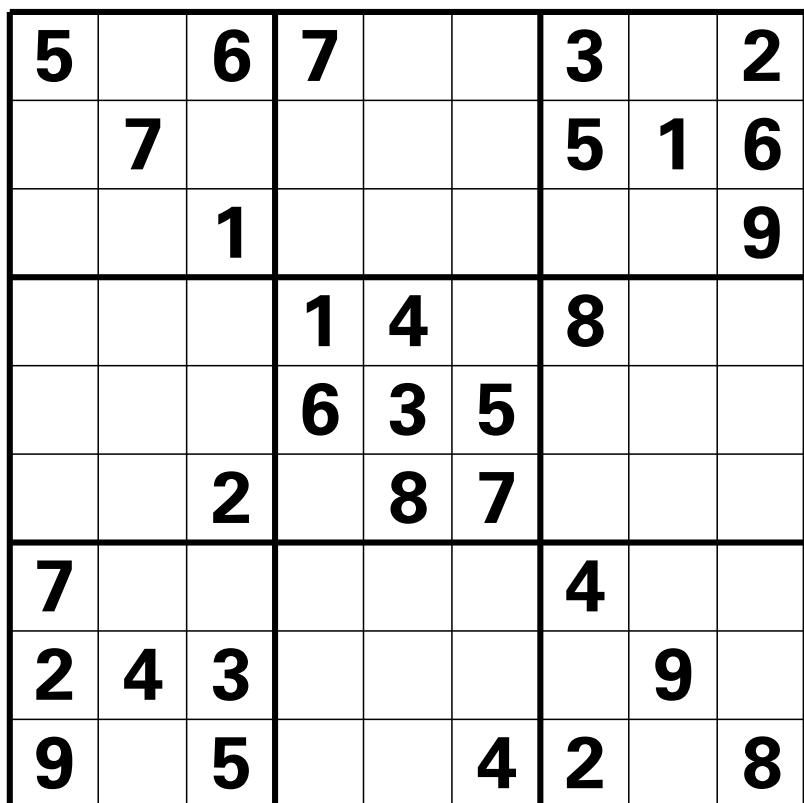
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FUN **FUN** **FUN** **FUN** **FUN** **FUN** **FUN** **FUN**

Sadge

Solution, page 3

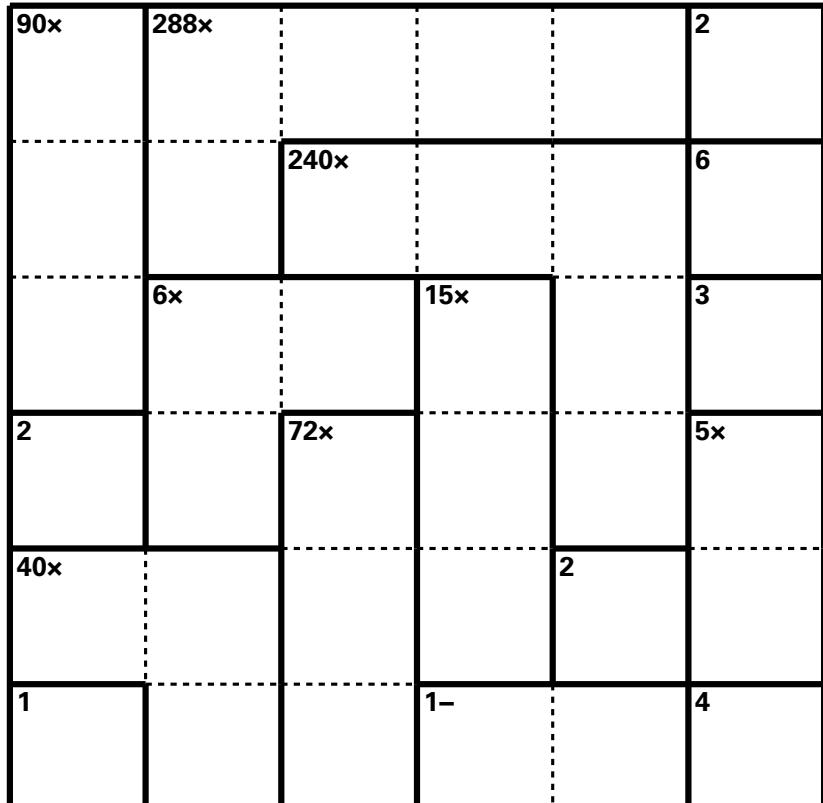
3 Solution, page 3



Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Smadge

Solution, page 3



Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

Blunder-ful by Sally R. Stein

Solution, page 3

ACROSS

- 1 Hoarse-sounding voice
- 5 Top-billed performer
- 9 Muscle soreness
- 13 Traveler's path
- 14 Gigantic
- 15 Coal dust
- 16 All gone, as a meal
- 17 Very dry, as a climate
- 18 Des Moines' state
- 19 Made errors in the outfield
- 22 "O __, can you see . . ."
- 23 Occupational suffix for
 auction
- 24 Swiss mountain
- 27 Walked away
- 30 Entryways
- 34 Weight loss plan
- 36 Sandy golf hazard
- 38 Black-and-white cookie
- 39 Burned dinners
- 43 At any time
- 44 Neutral, park, or reverse
- 45 "Shoo!"
- 46 Female and male
- 48 Competes on snowy

slopes

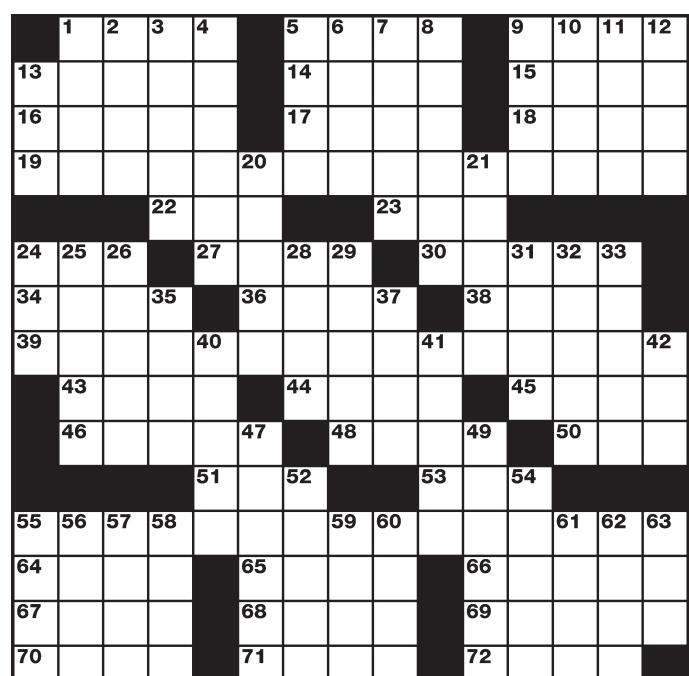
50 Make an attempt
51 And so on, for short
53 Snakelike fish
55 Made mistakes competing
 in bees
64 Neighborhood
65 Chessboard castle
66 Come __ of the rain (stop
 getting wet)
67 King __ (big ape of films)
68 Simplify
69 Birds' homes in trees
70 Brings to a close
71 Gave approval for
72 Earl __ tea

DOWN

1 Sound from a lion
2 Sedan or convertible
3 Rungs of a ladder
4 Letter-writing friend
5 Caviar fish
6 Surf and __ (combo entrée)
7 Quick and graceful
8 Changed the color of again

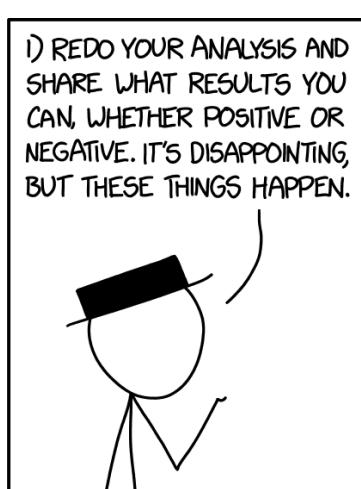
9 Largest continent

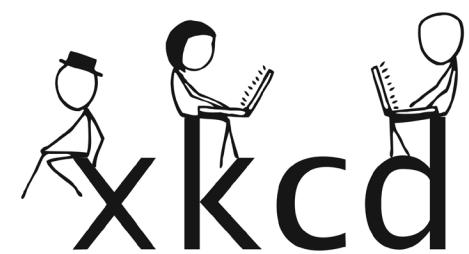
- 10 A little chilly
- 11 Coyote's cry
- 12 When trains are due in:
Abbr.
- 13 Color of rubies
- 20 With an __ (mindful of)
- 21 Witch's "stick" vehicle
- 24 "Without further __ . . ."
- 25 What biographies detail
- 26 "Pet" annoyance
- 28 Toad's cousin
- 29 Helps oneself to
- 31 Rocks found in mines
- 32 Give feedback
- 33 Powered by sunlight
- 35 Scary dinosaur, for short
- 37 Mountain's apex
- 40 Move like a snake
- 41 Helped with the dishes
- 42 Pigpen
- 47 Two-speaker audio system
- 49 Working with needle and
thread
- 52 __-and-dagger (secretive)
- 54 Reclusive person



- 60 __ out a living (scraped by)
- 61 Flower with thorns
- 62 Task that's required
- 63 Roads that often cross
avenues: Abbr.

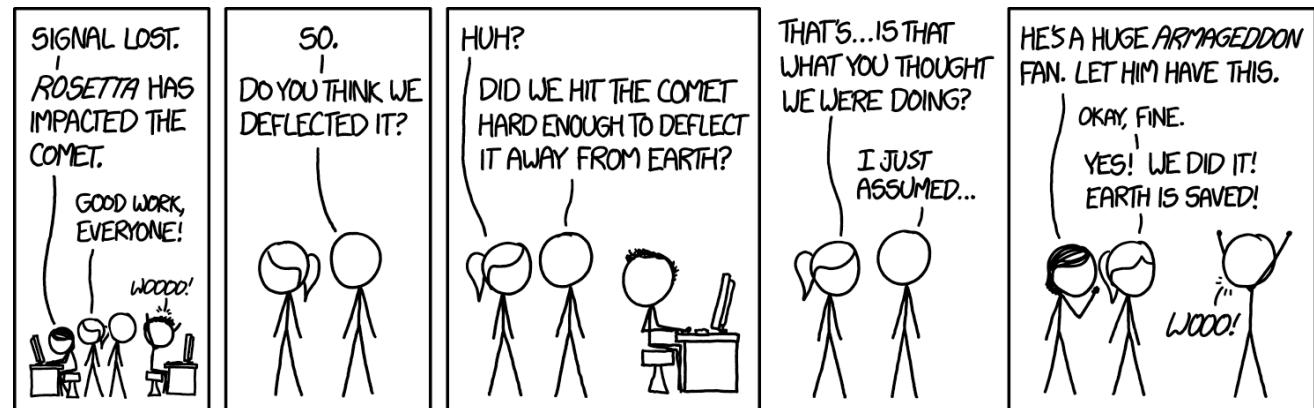
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**A WEBCOMIC OF ROMANCE,
SARCASM. MATH. AND LANGUAGE**
by Randall Munroe

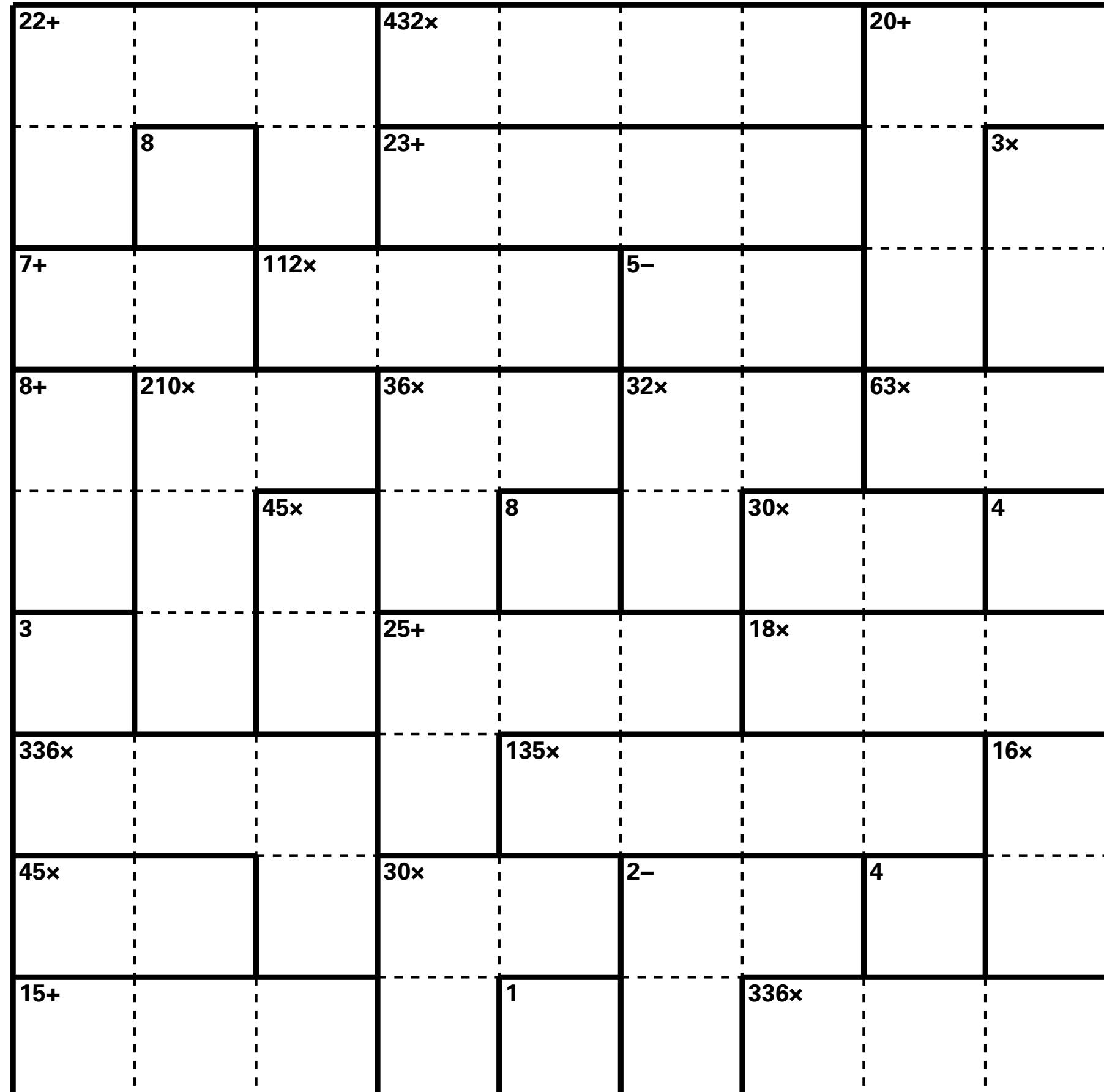
[1740] Rosetta



I WONDERED why he kept asking whether we thought the impact speed was too low.

Smodge

Solution, page 3

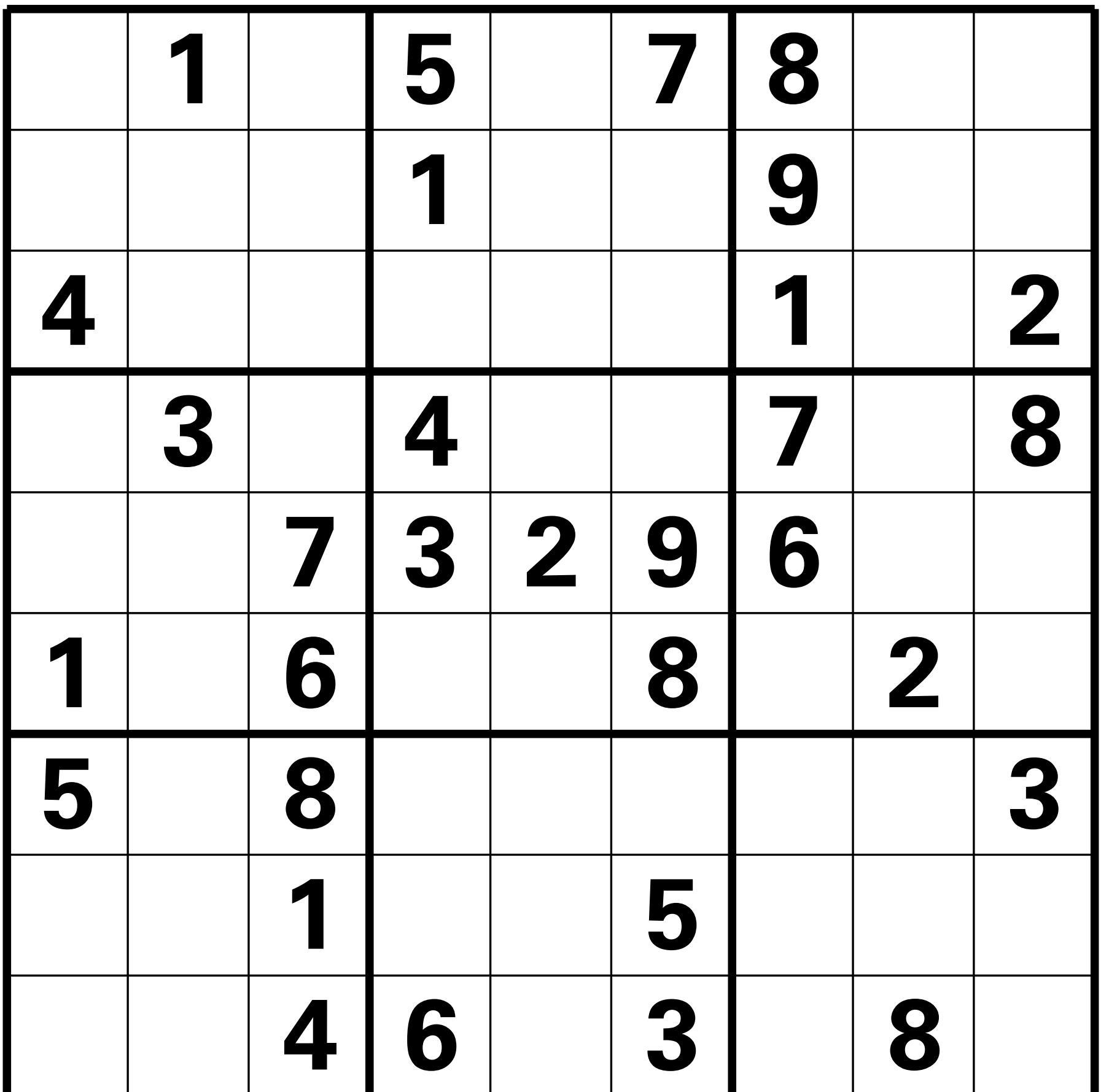


Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–9. Follow the mathematical operations for each box.

Smog

Solution, page 3

Solution, page 3



Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.



[2391] Life Before the Pandemic

